

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A computer-implemented speech recognition system comprising:
a microphone to receive user speech;
a speech recognition engine coupled to the microphone, and being adapted to recognize
the user speech and provide a textual output on a user interface;
wherein the system is adapted to recognize a user changing the textual output and
automatically, selectively adapt the speech recognition engine to learn from the
change; and
wherein the recognition engine is configured adapted to determine if a user's
pronunciation caused an error, and to selectively change increase at least one
HMM parameter ~~a probability~~ associated with an existing pronunciation.
2. (Canceled)
3. (Currently Amended) The system of claim 1, wherein the HMM parameter is an output
probability ~~recognition engine includes a user lexicon, and wherein the user lexicon is updated if~~
~~the correction is a word that is not in the user's lexicon.~~
4. (Currently Amended) The system of claim 1, wherein the HMM parameter is a transition
probability ~~recognition engine is adapted to selectively learn the user's pronunciation.~~
5. (Canceled)
6. (Canceled)

7. (Currently Amended) A method of learning with an automatic speech recognition system, the method comprising:

detecting a change to dictated text;

inferring whether the change is a correction, or editing;

wherein inferring whether the change is a correction, or editing includes comparing a speech recognition engine score of the dictated text and of the changed text;

if the change is inferred to be a correction, selectively learning from the nature of the correction without additional user interaction; and

wherein selectively learning from the nature of the correction includes:

determining if a user's pronunciation deviated from existing pronunciations

known by the system by doing a forced alignment of a wave based on at

least one context word; and

determining if the corrected word exists in the user's lexicon, and if the corrected

word does exist in the user lexicon, selectively changing an HMM

parameter~~increasing a probability~~ associated with the pronunciation.

8-14. (Canceled)

15. (Currently Amended) The method of claim ~~7~~14, wherein determining if the user's pronunciation deviated from existing pronunciations includes identifying in the wave the pronunciation of the corrected word.

16. (Original) The method of claim 15, and further comprising building a lattice based upon possible pronunciations of the corrected word and the recognition result.

17. (Previously Presented) The method of claim 16, and further comprising generating a confidence score based at least in part upon the distance of the pronunciation with the possible pronunciations.

18. (Previously Presented) The method of claim 16, and further comprising generating a confidence score based at least in part upon an Acoustic Model score of the pronunciation with the possible pronunciations.

19. (Original) The method of claim 17, wherein selectively learning the pronunciation includes comparing the confidence score to a threshold.

20-25. (Canceled)

26. (New) A method of learning with an automatic speech recognition system, the method comprising:

detecting a change to dictated text;

inferring whether the change is a correction, or editing;

wherein inferring whether the change is a correction, or editing includes comparing a speech recognition engine score of the dictated text and the changed text;

if the change is inferred to be a correction, selectively learning from the nature of the correction without additional user interaction,

wherein selectively learning from the nature of the correction includes selectively adding at least one word pair to the user's lexicon temporarily; and

wherein the length of time the word pair is added to the user's lexicon is based at least partially upon the most recent time the word pair is observed and the relative frequency that the pair has been observed in the past.

27. (New) The system of claim 1, wherein the system is configured to adapt the speech recognition engine if a distance between the user's pronunciation and a pronunciation of the changed textual output is above a threshold.
28. (New) The system of claim 27 wherein the threshold is pre-selected.
29. (New) The system of claim 27 wherein the threshold is dynamic.
30. (New) The system of claim 27, wherein the system is configured to identify the pronunciation of the changed textual output using a lattice constructed using phoneme sequences in a recognition result.
31. (New) The system of claim 27, wherein the distance is calculated based on an acoustic model score on the pronunciation of the changed textual output.
32. (New) The system of claim 17, wherein the distance is calculated using a phone confusion matrix and Dynamic Time Warping.
33. (New) The method of claim 17, wherein the confidence score is calculated using the function:
$$1-(1-p(d, AM))^f;$$

where $p(d, AM)$ is the probability that a pronunciation with a distance d and AM score is the correct pronunciation, and f is the frequency that the same recognized pronunciation is pronounced.
34. (New) The method of claim 17, wherein the confidence score is calculated using the function:

$$1/[d/f/\log(\text{len1}+\text{len2})];$$

where d is the distance between the recognized pronunciation and a best match in a lexicon, f is a frequency that the same pronunciation is pronounced, and len1 and len2 are the lengths of phonemes in a new pronunciation and the closest pronunciation, respectively.

35 (New) The method of claim 26 wherein the at least one word pair is added to the user's lexicon temporarily for a period of one day.

36. (New) The method of claim 26 wherein the at least one word pair is added to the user's lexicon temporarily for a period of 2 days.